

Piptatherum miliaceum (L.) Barkworth (Poaceae)
Smilo grass, Rice Grass

Description. Tufted perennials, 6-15 dm tall, stems erect, decumbent at the base, glabrous. Leaves alternate, mostly cauline; ligules 1.5-3 mm long, apices rounded to truncate; auricles absent; sheaths glabrous, persistent; blades linear, flat, 3-10 mm wide, minutely scabrous. Inflorescence a terminal, open panicle 15-30 cm long, the branches whorled, spreading to ascending. Spikelets composed of 1 floret, the glumes 2.5-4 mm long, subequal, lanceolate, 3-nerved, glabrous to minutely scabrous, the apices acuminate; lemma 2-3 mm long, oblong-elliptic, 3-nerved, smooth, shiny, the apex rounded, minutely bilobed, awned, the awn 2-3.5 mm long, straight, deciduous. In California, flowering from April to September. (Barkworth 1993, Chapman 1991, Hitchcock 1944, Holmgren and Holmgren 1977, Munz 1959, Tutin 1980).

Synonym: *Oryzopsis miliacea* (L.) Aschers. and Schweinf.

Geographic distribution. A native of southern Europe, smilo grass has been reported as waif in Great Britain and has become naturalized in California, western Nevada, and Australia. (Barkworth 1993, Clapham et al. 1962, Holmgren and Holmgren 1977, Munz 1959). Apparently it has not become established elsewhere in the world.

According to Robbins (1940), Smilo grass was first collected around the turn of the 19th century (Los Angeles in 1896, Santa Barbara and Monrovia in 1916) and had been reported mostly from urban waste areas in urban southern California by 1940. It has been reported from all four northern California Channel Islands (Junak et al. 1997) and is now known from most southern California counties (Anonymous 1998, Barkworth 1993).

Reproductive and vegetative biology. Like most species of grasses, smilo grass is wind-pollinated (Proctor et al. 1996). No literature was found that discussed aspects of its reproductive and vegetative biology.

Ecological distribution. Smilo grass has been reported from dry or moist sites in disturbed areas, roadsides, and ditches (Barkworth 1993, Munz 1959, Robbins 1940). It has been used in the revegetation of frequently burned chaparral (Hanes 1990). Zavas et al. (1996) studied ecotypes of *Piptatherum miliaceum* that included strains resistant to aluminum. In semi-arid Spain, smilo grass showed higher growth rates when infected with mycorrhizal fungi compared to uninfected plants (Roldan-Fajardo 1994).

Weed status. Smilo grass is not considered a noxious weed in agricultural or horticultural practice, at least at a global level (not listed by Holm et al. 1977), nor is it listed for the United States in Lorenzi and Jeffery (1987). However, it is considered a noxious weed by the State Dept. of Food and Agriculture (Anonymous 1996), especially in southern California riparian habitats.

Microbial and insect pathogens. No literature was found that reported smilo grass as a host to microbial or insect pathogens.

Herbicide control. No literature was found that reported use of herbicides to control smilo grass.

Literature Cited

- Anonymous. 1996. Exotic pest plants of greatest ecological concern in California as of August 1996. California Exotic Pest Plant Council. 8 pp.
- Anonymous. 1998. USDA Plants Database, Baton Rouge, LA. URL = usda.plants.gov.
- Barkworth, M. 1993. *Piptatherum*. pp.1282-1283. In Hickman, J. C. (ed.). The Jepson manual: vascular plants of California. University of California Press, Berkeley. 1400 pp.
- Clapham, A. R., Tutin, T. G., and Warburg, E. 1962. Flora of the British Isles. Cambridge University Press, Cambridge. 1269 pp.
- Hanes, T. 1990. California chaparral. pp.417-469. In Barbour, M. T. and J. Major. (eds.). Terrestrial vegetation of California. Special Publication No.9. California Native Plant Society, Sacramento, California. 1002 pp.
- Hitchcock, A. 1944. Poaceae. pp.103-255. In Abrams, L. Illustrated flora of the Pacific States. 1. Ophioglossaceae to Aristolochiaceae, Stanford University Press, Stanford, California. 538 pp.
- Holm, L. G., D. Plucknett, J. Pancho, and J. Herberger. 1977. The world's worst weeds: distribution and ecology. University Press of Hawaii, Honolulu. 609 pp.
- Holmgren, A. and N. Holmgren. 1977. Poaceae. pp. 175-462. In Cronquist et al. Intermountain Flora. Volume 6. The monocotyledons. New York Botanical Garden and Columbia University Press, New York. 584 p.
- Junak, S., S. Chaney, R. Philbrick, and R. Clark. 1997. A checklist of vascular plants of Channel Islands National Park. Southwest Parks and Monuments Association, Tucson, AZ. 43 pp.
- Lorenzi, H. and L. Jeffery. 1987. Weeds of the United States and their control. Van Nostrand Company, New York. 355 pp.
- Munz, P. 1959. A flora of California. University of California Press, Berkeley. 1681 pp.
- Proctor, M., P. Yeo, and A. Lack. 1996. The natural history of pollination. Timber Press, Portland, Oregon. 479 pp.
- Roldan-Fajardo, B. 1994. Effect of indigenous arbuscular mycorrhizal endophytes on the development of six wild plants colonizing a semi-arid area in south-east Spain. New Phytologist. 127:115-121.
- Tutin, T. 1980. *Piptatherum*. pp.246-247. In Tutin et al. (eds). Flora Europaea. Volume 5. Alismataceae to Orchidaceae. Cambridge University Press, Cambridge. 452 pp.
- Zavas, T. L., Symeonidis, S., and Karataglis. 1996. Responses to aluminium toxicity effects of two populations of *Piptatherum miliaceum* (L.) Cosson. Journal of Agronomy and Crop Science. 177: 25-32.